Summary, Inferences & Recommendations of The Research
CHAPTER V

SUMMARY, INFERENCES & RECOMMENDATION OF THE RESEARCH

5.1 Introduction:

Need to provide education to all children in the age group of 6 to 18 years. The national Policy on Education 1986 as revised in 1992 has also assigned top priority to provide quality education to children. Education is able to instill in the Child a sense of maturity and responsibility by bringing in the desired changes according to his needs and demands of ever changing society of which he is an integral part. Speaking more frankly, education bestows upon the child immense. It brings up the child as the parents do. It guides him like an affectionate father and serves him faithfully like a wife. A well educated person is known all over the region. He is able to meet the conflicting challenges and tide over all the difficulties which confront him in day to day living. Not only this, education culturists the individual and helps him in his needs all over the world.

Thus education develops the individual like a flower which distributes its fragrance all over the environment. In this sense, education is that conducive process which drags a person from darkness, poverty and misery by developing his individuality in all its aspects. Physical, mental, emotional and social with this type of all-round development, he becomes a responsible dynamic, resourceful and enterprising citizen of strong good moral character, who uses all his capacities to develop his own self, his society and his nation to the highest extent by contributing his best to national honor, national glory, national culture and civilization of the nation of which he is a part, an integral part. Just as, on one hand education develops to full the personality of an individual in all fields and aspects making him intelligent, learned bold, courageous and processing strong good character much in the same way. On the other hand, it contributes to the growth and development of society also. It is only through education those moral ideals and spiritual values, the aspiration of the nation and its cultural heritage is transferred from one generation to another for preservation, purification and sublimation into higher and higher achievements. Thus, education is greatly essential for the growth and development of individual as well as society. Hence, education is life and life is education. Commerce is one of the subjects which is helpful to understand the economic status of particular region,
which leads the market and provide direction to powerful economic status establishment.

In words of our Former Prime Minister Late Sh. Rajeev Gandhi "We will have to build our society, such a society where education must be honored. Education does not end after leaving school or college. It is a lifelong process. We cannot progress until our education is honored and we could not face the challenges in future to save our country."

5.2 Statement of the Problem:

A study of correlates of achievement of students in Elements of book keeping and accountancy for std XI in Mehsana District.

5.3 Importance of the study

1. Quality is the demand of the present time. Elements of book keeping and accountancy for students is one of the important subject of commerce, in this concern it is very necessary to check that the students how achieve their knowledge of elements of book keeping and accountancy for the competencies in the present time to fulfill he requirement of the commerce.

2. Present research focus on the achievement in the subject of the Elements of book keeping and accountancy for students of std-XI.

   Present research will be useful to know the level of the teacher competencies and its necessity.

3. Present research will be useful to make necessary change accordance with the level of competencies of the classroom Interaction in the present education system.

4. It will be useful to provide to achieve the traditional level of the competencies in the present education system.

5. Present research will be useful to know the problem regarding the classroom Interaction in the present education system.

6. Present research will be useful to teacher to make them competent accordance with classroom Interaction in the present education system.

7. Present research will be helpful to make necessary changes accordance with the achievement in the subject of the Elements of book keeping and accountancy for students of std-XI.
8. Present research will be helpful to the components affecting the accordance with the achievement in the subject of the Elements of book keeping and accountancy for students of std-XI.

5.4 Objectives of the study

1. To study the level of achievement of the students of standard-XI in the subject of the Elements of Book Keeping and Accountancy.
2. To study the level of achievement of the students of standard-XI in the subject of the Elements of Book Keeping and Accountancy with reference to gender.
3. To study the level of achievement of the students of standard-XI of higher secondary school in the subject of the Elements of Book Keeping and Accountancy with reference to Habitat.
4. To study the level of Intelligence of the students of standard-XI with reference to gender.
5. To study the level of Intelligence of the students of standard-XI of higher secondary school with reference to Habitat.
6. To study the level of numerical Ability of the students of standard-XI with reference to gender.
7. To study the level of numerical Ability of the students of standard-XI of higher secondary school with reference to Habitat.
8. To study the level of Classroom Interaction of the students of standard-XI with reference to gender.
9. To study the level of Classroom Interaction of the students of standard-XI of higher secondary school with reference to Habitat.
10. To study the correlation between achievement of the students, intelligence, numerical ability and classroom interaction in the subject of the Elements of Book Keeping and Accountancy with reference to Gender and Habitat of student.

5.5 Delimitation of the study

Present study was study of achievement, intelligence, numerical ability and classroom interaction of students with selected variable of Gender(Male/Female) and Habitat(Urban/Rural)of standard-XI in the subject of the Elements of Book Keeping and Accountancy, with reference to Mehsana District of the Gujarat State and the selected students were also delimited who are studying during the year of 2014-2015.
according to Gujarat State Higher Secondary School Curriculum of subject of the Elements of Book Keeping and Accountancy of Class-XI with Gujarati medium only.

5.6 Operational definitions of Key-word

- **Higher Secondary School Students**
  In this present study students of the Higher Secondary School with the commerce stream having subject of accountancy were considered as the Higher Secondary School for the study.

- **Intelligence**
  In this present study intelligence test prepared by the R. S. Patel is considered as the Intelligence of the Higher Secondary School.

- **Numerical ability**
  In this present study Numerical Ability test prepared by the R. S. Patel is considered as the Numerical Ability of the Higher Secondary School students.

- **Achievement:**
  In this present study achievement est prepared by the investigator for the present study and score achieved by the higher secondary school students of commerce stream in the subject of Elements of Book Keeping & Accountancy were considered as the achievement of students.

- **Class room interaction:**
  In this present study Teacher Effectiveness Scale prepared by the investigator for the present study and score achieved by the higher secondary school students of commerce stream on Teacher Effectiveness Scale were considered as the Class room interaction.
5.7 Variables of the Study

Table: 5.1

Variables of the Study

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Types of Variable</th>
<th>Variable</th>
<th>Level of Variable</th>
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<td>1</td>
<td>Independent</td>
<td>Gender</td>
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<td>Female</td>
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<td>Classroom Interaction</td>
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5.8 Population and sample of the study

The primary purpose of the research is to discover principles that have universal application, but to study a whole population to arrive at generalization would be impracticable if not impossible. The process of sampling makes it possible to draw valid inferences or generalization on the basis of careful observation of variables within a small proportion of the population. Therefore, a sample is a small proportion of population selected for observation and analysis. Samples are not selected haphazardly but they are chosen in a systematically random way, so that chance or operation of the probability can be utilized. In this present research all the students of higher secondary school with commerce stream having subject of Elements of Book Keeping and Accountancy with Gujarati medium and enrolled for the year of 2014-2015 in the Eleven standard of the Gujarat state Higher Secondary education curriculum in Mehsana District from the Gujarat State were considered as the population of the study.

In this present research Stratified quota random sampling technique was used for the selection of the students from the higher secondary school with commerce stream having subject of Elements of Book Keeping and Accountancy with Gujarati medium and enrolled for the year of 2014-2015 in the Eleven standard of the Gujarat state Higher Secondary education curriculum were considered as the population of the study.
In this present research for the selection of the sample all the 10 blocks of the Mehsana District from the Gujarat State were selected as the Sampling and gender wise male and female same as habitat wise rural and urban habitat same proportion of the number of the students from the each Block with selection of schools were taken into consideration of at least 60 percentages of the schools with the ratio of the students for the further study. In this present study Stratified quota random sampling technique. So it is observed that 1949 male students and 642 female students were selected randomly from the each Block and same as 778 rural habitat and 1813 urban habitat students were selected from each block. Finally it has been seen that that 2591 students were selected for the present study.

5.9 Tool Used For the Study
1) Achievement Test
2) Intelligence Test
3) Numerical Ability Test
4) Teacher effectiveness Scale

5.10 Data Collection and data analysis
Data were collected personally by approaching school principals by visiting schools. For the advanced permission for data collection and administration of the tools and tools were applied for the collection of the data. Data collected with help of the different tools and data were analyzed by the frequency distribution, standard deviation, mean and t-test, co-relation and partial correlation technique.

5.11 Major findings of the study
Major findings of the present study are given as follows.
5.11.1 Skewness of the selected sample on the research tools
5.11.2 Kurtosis of the selected sample on the research tools
5.11.3 Effectiveness of Achievement of subject of the Elements of Book Keeping and Accountancy
5.11.4 Correlations between achievement test Intelligence test Numerical ability test and Classroom Interaction test
5.11.5 Partial correlation

5.11.1 Skewness of the selected sample on the research tools
- Gender-wise habitat of higher secondary school students group of male-rural habitat, female-rural habitat, male-urban habitat, female-urban habitat, urban habitat, rural habitat, male, female and total sample of the study of group of
higher secondary school students of standard-XI were found Skew-ness on the score of the achievement of the students of standard-XI in the subject of the Elements of Book Keeping and Accountancy, from the observation it has been seen that majority of the all samples are positively skewed, sample with high score on the achievement.

- Gender-wise habitat of higher secondary school students group of male-rural habitat, female-rural habitat, male-urban habitat, female-urban habitat, urban habitat, rural habitat, male, female and total sample of the study of group of higher secondary school students of standard-XI were found Skew-ness on the score of the intelligence of the students of standard-XI with the subject of the Elements of Book Keeping and Accountancy, from the observation it has been seen that majority of the all samples are positively skewed, sample with high score on the intelligence.

- Gender-wise habitat of higher secondary school students group of male-rural habitat, female-rural habitat, male-urban habitat, female-urban habitat, urban habitat, rural habitat, male, female and total sample of the study of group of higher secondary school students of standard-XI were found Skew-ness on the score of the numerical ability of the students of standard-XI with the subject of the Elements of Book Keeping and Accountancy, from the observation it has been seen that majority of the all samples are positively skewed, sample with high score on the numerical ability.

- Gender-wise habitat of higher secondary school students group of male-rural habitat, female-rural habitat, male-urban habitat, female-urban habitat, urban habitat, rural habitat, male, female and total sample of the study of group of higher secondary school students of standard-XI were found Skew-ness on the score of the classroom interaction of the students of standard-XI with the subject of the Elements of Book Keeping and Accountancy, from the observation it has been seen that majority of the all samples are positively skewed, sample with high score on the classroom interaction.

5.11.2 Kurtosis of the selected sample on the research tools

- Gender-wise habitat of higher secondary school students group of male-rural habitat, female-rural habitat, male-urban habitat, female-urban habitat, urban habitat, rural habitat, male, female and total sample of the study of group of
higher secondary school students of standard-XI were found Kurtosis on the score of the achievement of the students of standard-XI in the subject of the Elements of Book Keeping and Accountancy, from the observation it has been seen that majority of the all samples are near to the value of 0.263, which shows that the selected sample for the present research group follows the Non Probability curve for the generalization of the data. Platy Kurtosis were found on the sample of Male-rural, female-rural, urban habitat, rural habitat, male and total sample, while Lepto Kurtosis were found on the sample of female. Majority Critical ratio Kurtosis of above samples are found not significant which shows that the frequency distributions has not variation comparing with non-probability curve

- Gender-wise habitat of higher secondary school students group of male-rural habitat, female-rural habitat, male-urban habitat, female-urban habitat, urban habitat, rural habitat, male, female and total sample of the study of group of higher secondary school students of standard-XI were found Kurtosis on the score of the intelligence of the students of standard-XI with the subject of the Elements of Book Keeping and Accountancy, from the observation it has been seen that majority of the all samples are near to the value of 0.263, which shows that the selected sample for the present research group follows the Non Probability curve for the generalization of the data. Platy Kurtosis were found on the sample of Male-rural, female-rural, urban habitat, rural habitat, male and total sample, while Lepto Kurtosis were found on the sample of female. Majority Critical ratio Kurtosis of above samples are found not significant which shows that the frequency distributions has not variation comparing with non-probability curve.

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Data Analysis and interpretation

5.12.3 Effectiveness of Achievement of subject of the Elements of Book Keeping and Accountancy

- Male students of standard-XI of Higher secondary school of the commerce stream are found higher than achievement of Female students of standard-XI of Higher secondary school of the commerce stream on achievement of subject of the Elements of Book Keeping and Accountancy.

- Urban habitat students of standard-XI of Higher secondary school of the commerce stream are found higher than achievement of Rural habitat students of standard-XI of Higher secondary school of the commerce stream on achievement of subject of the Elements of Book Keeping and Accountancy.
- Male urban habitat students of standard-XI of Higher secondary school of the commerce stream are found higher than achievement of Male rural habitat students of standard-XI of Higher secondary school of the commerce stream on achievement of subject of the Elements of Book Keeping and Accountancy.
- Female urban students of standard-XI of Higher secondary school of the commerce stream on achievement of subject of the Elements of Book Keeping and Accountancy.
- Male urban habitat students of standard-XI of Higher secondary school of the commerce stream are found same as achievement of Female urban habitat students of standard-XI of Higher secondary school of the commerce stream on achievement of subject of the Elements of Book Keeping and Accountancy.
- Male rural habitat students of standard-XI of Higher secondary school of the commerce stream are found same as achievement of Female rural habitat students of standard-XI of Higher secondary school of the commerce stream on achievement of subject of the Elements of Book Keeping and Accountancy.

**Effectiveness Intelligence test on different sample:**
- Male students of standard-XI of Higher secondary school of the commerce stream are found higher than Intelligence test of Female students of standard-XI of Higher secondary school of the commerce stream on Intelligence Test.
- Urban habitat students of standard-XI of Higher secondary school of the commerce stream are found higher than Intelligence test of Rural habitat students of standard-XI of Higher secondary school of the commerce stream on Intelligence Test.
- Male urban habitat students of standard-XI of Higher secondary school of the commerce stream are found higher than Intelligence test of Male rural habitat students of standard-XI of Higher secondary school of the commerce stream on Intelligence Test.
- Female urban students of standard-XI of Higher secondary school of the commerce stream are same as Intelligence test of Female rural students of standard-XI of Higher secondary school of the commerce stream on Intelligence Test.
- Male urban habitat students of standard-XI of Higher secondary school of the commerce stream are found same as Intelligence test of Female urban habitat
students of standard-XI of Higher secondary school of the commerce stream on Intelligence Test.

- Male rural habitat students of standard-XI of Higher secondary school of the commerce stream are found same as Intelligence test of Female rural habitat students of standard-XI of Higher secondary school of the commerce stream on Intelligence Test.

**Effectiveness of Numerical ability test on different sample**

- Male students of standard-XI of Higher secondary school of the commerce stream are found higher than Numerical Ability of Female students of standard-XI of Higher secondary school of the commerce stream on Numerical Ability Test.

- Urban habitat students of standard-XI of Higher secondary school of the commerce stream are found higher than Numerical Ability of Rural habitat students of standard-XI of Higher secondary school of the commerce stream on Numerical Ability Test.

- Male urban habitat students of standard-XI of Higher secondary school of the commerce stream are found higher than Numerical Ability of Male rural habitat students of standard-XI of Higher secondary school of the commerce stream on Numerical Ability Test.

- Female urban students of standard-XI of Higher secondary school of the commerce stream are found higher than Numerical Ability of Female rural students of standard-XI of Higher secondary school of the commerce stream on Numerical Ability Test.

- Male urban habitat students of standard-XI of Higher secondary school of the commerce stream are found same as Numerical Ability of Female urban habitat students of standard-XI of Higher secondary school of the commerce stream on Numerical Ability Test.

- Male rural habitat students of standard-XI of Higher secondary school of the commerce stream are found same as Numerical Ability of Female rural habitat students of standard-XI of Higher secondary school of the commerce stream on Numerical Ability Test.
Effectiveness of Classroom Interaction on different sample

- Male students of standard-XI of Higher secondary school of the commerce stream are found higher than Classroom Interaction of Female students of standard-XI of Higher secondary school of the commerce stream on Classroom interaction.

- Urban habitat students of standard-XI of Higher secondary school of the commerce stream are found higher than Classroom Interaction of Rural habitat students of standard-XI of Higher secondary school of the commerce stream on Classroom interaction.

- Male urban habitat students of standard-XI of Higher secondary school of the commerce stream are found higher than Classroom Interaction of Male rural habitat students of standard-XI of Higher secondary school of the commerce stream on Classroom interaction.

- Female urban habitat students of standard-XI of Higher secondary school of the commerce stream are not found higher than Classroom Interaction of Female rural habitat students of standard-XI of Higher secondary school of the commerce stream on Classroom interaction.

- Male urban habitat students of standard-XI of Higher secondary school of the commerce stream are found same as Classroom Interaction of Female urban habitat students of standard-XI of Higher secondary school of the commerce stream on Classroom interaction.

- Male rural habitat students of standard-XI of Higher secondary school of the commerce stream are found same as Classroom Interaction of Female rural habitat students of standard-XI of Higher secondary school of the commerce stream on Classroom interaction.

5.11.4 Correlations between achievement test Intelligence test Numerical ability test and Classroom Interaction test

Effectiveness of correlation between score of achievement and Intelligence Test of students of standard-XI of Higher secondary school of the commerce stream:

- Correlation between score of achievement and Intelligence Test of total sample students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that
Correlation between score of achievement and Intelligence Test is significant and positive.

- Correlation between score of achievement and Intelligence Test of male students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Intelligence Test is significant and positive.
- Correlation between score of achievement and Intelligence Test of male urban students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Intelligence Test is significant and positive.
- Correlation between score of achievement and Intelligence Test of male rural students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Intelligence Test is significant and positive.
- Correlation between score of achievement and Intelligence Test of female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Intelligence Test is significant and positive.
- Correlation between score of achievement and Intelligence Test of urban female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Intelligence Test is significant and positive.
- Correlation between score of achievement and Intelligence Test of rural female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Intelligence Test is significant and positive.
- Correlation between score of achievement and Intelligence Test of urban students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Intelligence Test is significant and positive.
Correlation between score of achievement and Intelligence Test of rural students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Intelligence Test is significant and positive.

Effectiveness of correlation between score of achievement and Numerical Ability of students of standard-XI of Higher secondary school of the commerce stream:

- Correlation between score of achievement and Numerical Ability of total sample students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Numerical Ability is significant and positive.
- Correlation between score of achievement and Numerical Ability of male students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Numerical Ability is significant and positive.
- Correlation between score of achievement and Numerical Ability of male urban students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Numerical Ability is significant and positive.
- Correlation between score of achievement and Numerical Ability of male rural students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Numerical Ability is significant and positive.
- Correlation between score of achievement and Numerical Ability of female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Numerical Ability is significant and positive.
- Correlation between score of achievement and Numerical Ability of urban female students of standard-XI of Higher secondary school of the commerce
stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Numerical Ability is significant and positive.

- Correlation between score of achievement and Numerical Ability of rural female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Numerical Ability is significant and positive.

- Correlation between score of achievement and Numerical Ability of urban students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Numerical Ability is significant and positive.

- Correlation between score of achievement and Numerical Ability of rural students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Numerical Ability is significant and positive.

Effectiveness of correlation between score of achievement and Classroom Interaction of students of standard-XI of Higher secondary school of the commerce stream:

- Correlation between score of achievement and Classroom Interaction of total sample students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Classroom Interaction is significant and positive.

- Correlation between score of achievement and Classroom Interaction of male students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Classroom Interaction is significant and positive.

- Correlation between score of achievement and Classroom Interaction of male urban students of standard-XI of Higher secondary school of the commerce
stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Classroom Interaction is significant and positive.

- Correlation between score of achievement and Classroom Interaction of male rural students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Classroom Interaction is significant and positive.

- Correlation between score of achievement and Classroom Interaction of female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Classroom Interaction is significant and positive.

- Correlation between score of achievement and Classroom Interaction of urban female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Classroom Interaction is significant and positive.

- Correlation between score of achievement and Classroom Interaction of rural female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Classroom Interaction is significant and positive.

- Correlation between score of achievement and Classroom Interaction of urban students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Classroom Interaction is significant and positive.

- Correlation between score of achievement and Classroom Interaction of rural students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of achievement and Classroom Interaction is significant and positive.
Effectiveness of correlation between score of Intelligence Test and Numerical Ability of students of standard-XI of Higher secondary school of the commerce stream:

- Correlation between score of intelligence and Numerical Ability of total sample students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Numerical Ability is significant and positive.

- Correlation between score of intelligence and Numerical Ability of male students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Numerical Ability is significant and positive.

- Correlation between score of intelligence and Numerical Ability of male urban students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Numerical Ability is significant and positive.

- Correlation between score of intelligence and Numerical Ability of male rural students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Numerical Ability is significant and positive.

- Correlation between score of intelligence and Numerical Ability of female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Numerical Ability is significant and positive.

- Correlation between score of intelligence and Numerical Ability of urban female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Numerical Ability is significant and positive.
Correlation between score of intelligence and Numerical Ability of rural female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Numerical Ability is significant and positive.

Correlation between score of intelligence and Numerical Ability of urban students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Numerical Ability is significant and positive.

Correlation between score of intelligence and Numerical Ability of rural students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Numerical Ability is significant and positive.

Effectiveness of correlation between score of Intelligence Test and Classroom Interaction of students of standard-XI of Higher secondary school of the commerce stream:

Correlation between score of intelligence and Classroom interaction of total sample students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Classroom interaction is significant and positive.

Correlation between score of intelligence and Classroom interaction of male students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Classroom interaction is significant and positive.

Correlation between score of intelligence and Classroom interaction of urban male students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Classroom interaction is significant and positive.
• Correlation between score of intelligence and Classroom interaction of rural male students of standard-XI of Higher secondary school of the commerce stream were found not significant but positive. Hence it can be conclude that Correlation between score of intelligence and Classroom interaction is positive but not significant.

• Correlation between score of intelligence and Classroom interaction of female students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Classroom interaction is significant and positive.

• Correlation between score of intelligence and Classroom interaction of urban female students of standard-XI of Higher secondary school of the commerce stream was found not significant but positive. Hence it can be conclude that Correlation between score of intelligence and Classroom interaction is positive but not significant.

• Correlation between score of intelligence and Classroom interaction of rural female students of standard-XI of Higher secondary school of the commerce stream was found not significant but positive. Hence it can be conclude that Correlation between score of intelligence and Classroom interaction is positive but not significant.

• Correlation between score of intelligence and Classroom interaction of urban students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of intelligence and Classroom interaction is significant and positive.

• Correlation between score of intelligence and Classroom interaction of rural students of standard-XI of Higher secondary school of the commerce stream was found not significant but positive. Hence it can be conclude that Correlation between score of intelligence and Classroom interaction is positive but not significant.
Effectiveness of correlation between score of Numerical Ability and Classroom Interaction of students of standard-XI of Higher secondary school of the commerce stream:

- Correlation between score of numerical ability and Classroom interaction of total sample students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of numerical ability and Classroom interaction is significant and positive.

- Correlation between score of numerical ability and Classroom interaction of male students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of numerical ability and Classroom interaction is significant and positive.

- Correlation between score of numerical ability and Classroom interaction of urban male students of standard-XI of Higher secondary school of the commerce stream were found significant and positive. Hence it can be conclude that Correlation between score of numerical ability and Classroom interaction is significant and positive.

- Correlation between score of numerical ability and Classroom interaction of rural male students of standard-XI of Higher secondary school of the commerce stream were found not significant but positive. Hence it can be conclude that Correlation between score of numerical ability and Classroom interaction not significant but positive.

- Correlation between score of numerical ability and Classroom interaction of female students of standard-XI of Higher secondary school of the commerce stream were found not significant but positive. Hence it can be conclude that Correlation between score of numerical ability and Classroom interaction is not significant but positive.

- Correlation between score of numerical ability and Classroom interaction of urban female students of standard-XI of Higher secondary school of the commerce stream were found not significant but positive. Hence it can be conclude that Correlation between score of numerical ability and Classroom interaction is not significant but positive.
Correlation between score of numerical ability and Classroom interaction of rural female students of standard-XI of Higher secondary school of the commerce stream were found not significant but positive. Hence it can be conclude that Correlation between score of numerical ability and Classroom interaction is not significant but positive.

Correlation between score of numerical ability and Classroom interaction of urban students of standard-XI of Higher secondary school of the commerce stream were found not significant but positive. Hence it can be conclude that Correlation between score of numerical ability and Classroom interaction is not significant but positive.

Correlation between score of numerical ability and Classroom interaction of rural students of standard-XI of Higher secondary school of the commerce stream were found not significant but positive. Hence it can be conclude that Correlation between score of numerical ability and Classroom interaction is not significant but positive.

5.12.5 Partial correlation

OBSERVATION DESCRIPTION OF PARTIAL CORRELATION SAMPLE OF TOTAL STUDENTS OF STANDARD-XI:

Observation Description of Partial Correlation between Achievement & Intelligence Numerical ability of sample of total students of standard-XI

- There is significant difference found between Partial correlation of score of Total students of Sample of the study of standard-XI on achievement test and Intelligence test with Numerical ability were found r(Achievement & Intelligence)_(Numerical ability).
- There is significant difference found between Partial correlation of score of total students of standard-XI on intelligence test and Numerical ability Test with Achievement test were found r(Intelligence & Numerical)_(Achievement).
- There is significant difference found between Partial correlation of score of total students of standard-XI on Achievement test and Numerical ability Test with Intelligence test were found r(Achievement & Numerical)_(Intelligence).
Observation Description of Partial Correlation between intelligence & Numerical ability with achievement test of sample of total students of standard-XI

- There is significant difference found between Partial correlation of score of Total students of Sample of the study of standard-XI on Achievement test and Intelligence test with Classroom Interaction were found r (Achievement & Intelligence) _ (Classroom Interaction).
- There is no significant difference found between Partial correlation of score of total students of standard-XI on intelligence test and Classroom Interaction with Achievement test were found r (Intelligence & Classroom Interaction) _ (Achievement).
- There is no significant difference found between Partial correlation of score of total students of standard-XI on Achievement test and Classroom Interaction with Intelligence test were found r (Achievement & Classroom Interaction) _ (Intelligence).

Observation Description of Partial Correlation between Achievement & Numerical ability with Intelligence of sample of total students of standard-XI

- There is significant difference found between Partial correlation of score of Total students of Sample of the study of standard-XI on intelligence and Numerical Ability test with Classroom Interaction were found r (Intelligence & Numerical Ability) _ (Classroom Interaction)
- There is no significant difference found between Partial correlation of score of sample of total students of standard-XI on Intelligence and Classroom Interaction with Numerical Ability test were found r (Intelligence & Classroom Interaction) _ (Numerical Ability).
- There is no significant difference found between Partial correlation of score of sample of total students of standard-XI on Intelligence test and Classroom Interaction with Numerical ability test were found r(Intelligence& Classroom Interaction)(Numerical ability).

OBSERVATION DESCRIPTION OF PARTIAL CORRELATION SAMPLE OF MALE STUDENTS OF STANDARD-XI:

Observation Description of Partial Correlation between Achievement & Intelligence Numerical ability of sample of male students of standard-XI
• There is significant difference found between Partial correlation of score of Male students Sample of the study of standard-XI on achievement test and Intelligence test with Numerical ability were found r(Achievement & Intelligence)_(Numerical ability).

• There is significant difference found between Partial correlation of score of Sample of male students of standard-XI on intelligence test and Numerical ability Test with Achievement test were found r(Intelligence & Numerical)_(Achievement).

• There is significant difference found between Partial correlation of score of Sample of male students of standard-XI on Achievement test and Numerical ability Test with Intelligence test were found r(Achievement & Numerical ability)_(Intelligence).

Observation Description of Partial Correlation between intelligence & Numerical ability with achievement test of sample of male students of standard-XI

• There is significant difference found between Partial correlation of score of Male students Sample of the study of standard-XI on Achievement test and Intelligence test with Classroom Interaction were found r (Achievement & Intelligence) _(Classroom Interaction).

• There is no significant difference found between Partial correlation of score of Sample of male students of standard-XI on intelligence test and Classroom Interaction with Achievement test were found r (Intelligence & Classroom Interaction) _(Achievement).

• There is no significant difference found between Partial correlation of score of Sample of male students of standard-XI on Achievement test and Classroom Interaction with Intelligence test were found r (Achievement & Classroom Interaction) _(Intelligence).

Observation Description of Partial Correlation between Achievement & Numerical ability with Intelligence of sample of male students of standard-XI

• There is significant difference found between Partial correlation of score of Male students Sample of the study of standard-XI on intelligence and Numerical Ability test with Classroom Interaction were found r (Intelligence & Numerical Ability) _(Classroom Interaction).
• There is no significant difference found between Partial correlation of score of Sample of male students of standard-XI on Numerical Ability and Classroom Interaction with Intelligence test were found r (Numerical Ability & Classroom Interaction) _ (Intelligence).

• There is no significant difference found between Partial correlation of score of Sample of male students of standard-XI on Intelligence test and Classroom Interaction with Numerical ability test were found r(Intelligence& Classroom Interaction)_(Numerical ability).

OBSERVATION DESCRIPTION OF PARTIAL CORRELATION SAMPLE OF FEMALE STUDENTS OF STANDARD-XI:

Observation Description of Partial Correlation between Achievement & Intelligence Numerical ability of sample of female students of standard-XI:

• There is significant difference found between Partial correlation of score of Female students Sample of the study of standard-XI on achievement test and Intelligence test with Numerical ability were found r(Achievement & Intelligence)_ (Numerical ability).

• There is significant difference found between Partial correlation of score of Sample of female students of standard-XI on intelligence test and Numerical ability Test with Achievement test were found r(Intelligence & Numerical)_ (Achievement).

• There is significant difference found between Partial correlation of score of Sample of female students of standard-XI on Achievement test and Numerical ability Test with Intelligence test were found r(Achievement & Numerical)_ (Intelligence).

Observation Description of Partial Correlation between intelligence & Numerical ability with achievement test of sample of female students of standard-XI:

• There is significant difference found between Partial correlation of score of Female students Sample of the study of standard-XI on Achievement test and Intelligence test with Classroom Interaction were found r (Achievement & Intelligence) _ (Classroom Interaction).

• There is no significant difference found between Partial correlation of score of Sample of female students of standard-XI on intelligence test and Classroom
Interaction with Achievement test were found \( r \) (Intelligence & Classroom Interaction) \( \_ \) (Achievement).

- There is no significant difference found between Partial correlation of score of Sample of female students of standard-XI on Achievement test and Classroom Interaction with Intelligence test were found \( r \) (Achievement & Classroom Interaction) \( \_ \) (Intelligence).

**Observation Description of Partial Correlation between Achievement & Numerical ability with Intelligence of sample of female students of standard-XI**

- There is significant difference found between Partial correlation of score of Female students Sample of the study of standard-XI on intelligence and Numerical Ability test with Classroom Interaction were found \( r \) (Intelligence & Numerical Ability) \( \_ \) (Classroom Interaction).

- There is no significant difference found between Partial correlation of score of Sample of female students of standard-XI on Numerical Ability and Classroom Interaction with Intelligence test were found \( r \) (Numerical Ability & Classroom Interaction) \( \_ \) (Intelligence).

- There is no significant difference found between Partial correlation of score of Sample of female students of standard-XI on Intelligence test and Classroom Interaction with Numerical ability test were found \( r \) (Intelligence & Classroom Interaction \( \_ \) (Numerical ability).

**OBSERVATION DESCRIPTION OF PARTIAL CORRELATION SAMPLE OF URBAN HABITAT STUDENTS OF STANDARD-XI:**

**Observation Description of Partial Correlation between Achievement & Intelligence Numerical ability of sample of urban habitat students of standard-XI**

- There is significant difference found between Partial correlation of score of Urban habitat students Sample of the study of standard-XI on achievement test and Intelligence test with Numerical ability were found \( r \) (Achievement & Intelligence) \( \_ \) (Numerical ability).

- There is significant difference found between Partial correlation of score of Sample of urban habitat students of standard-XI on intelligence test and Numerical ability Test with Achievement test were found \( r \) (Intelligence & Numerical) \( \_ \) (Achievement).
• There is significant difference found between Partial correlation of score of Sample of urban habitat students of standard-XI on Achievement test and Numerical ability Test with Intelligence test were found r(Achievement & Numerical)_ (Intelligence).

Observation Description of Partial Correlation between intelligence & Numerical ability with achievement test of sample of urban habitat students of standard-XI
• There is significant difference found between Partial correlation of score of urban habitat students Sample of the study of standard-XI on Achievement test and Intelligence test with Classroom Interaction were found r (Achievement & Intelligence) _ (Classroom Interaction).
• There is no significant difference found between Partial correlation of score of Sample of urban habitat students of standard-XI on intelligence test and Classroom Interaction with Achievement test were found r (Intelligence & Classroom Interaction) _ (Achievement).
• There is no significant difference found between Partial correlation of score of Sample of urban habitat students of standard-XI on Achievement test and Classroom Interaction with Intelligence test were found r (Achievement & Classroom Interaction) _ (Intelligence).

Observation Description of Partial Correlation between Achievement & Numerical ability with Intelligence of sample of urban habitat students of standard-XI
• There is significant difference found between Partial correlation of score of urban habitat students Sample of the study of standard-XI on intelligence and Numerical Ability test with Classroom Interaction were found r (Intelligence & Numerical Ability) _ (Classroom Interaction).
• There is no significant difference found between Partial correlation of score of Sample of urban habitat students of standard-XI on Numerical Ability and Classroom Interaction with Intelligence test were found r (Numerical Ability & Classroom Interaction) _ (Intelligence).
• There is no significant difference found between Partial correlation of score of Sample of urban habitat students of standard-XI on Intelligence test and
Classroom Interaction with Numerical ability test were found $r$(Intelligence & Classroom Interaction) _(Numerical ability).

**OBSERVATION DESCRIPTION OF PARTIAL CORRELATION SAMPLE OF RURAL HABITAT STUDENTS OF STANDARD-XI:**

Observation Description of Partial Correlation between Achievement & Intelligence Numerical ability of sample of rural habitat students of standard-XI

- There is significant difference found between Partial correlation of score of Rural habitat students Sample of the study of standard-XI on achievement test and Intelligence test with Numerical ability were found $r$(Achievement & Intelligence) _(Numerical ability).
- There is significant difference found between Partial correlation of score of Sample of rural habitat students of standard-XI on intelligence test and Numerical ability Test with Achievement test were found $r$(Intelligence & Numerical) _(Achievement)
- There is no significant difference found between Partial correlation of score of Sample of rural habitat students of standard-XI on Achievement test and Numerical ability Test with Intelligence test were found $r$(Achievement & Numerical ability) _(Intelligence).

**Observation Description of Partial Correlation between intelligence & Numerical ability with achievement test of sample of rural habitat students of standard-XI**

- There is significant difference found between Partial correlation of score of rural habitat students Sample of the study of standard-XI on Achievement test and Intelligence test with Classroom Interaction were found $r$ (Achievement & Intelligence) _(Classroom Interaction).
- There is significant difference found between Partial correlation of score of Sample of rural habitat students of standard-XI on intelligence test and Classroom Interaction with Achievement test were found $r$ (Intelligence & Classroom Interaction) _(Achievement).
- There is no significant difference found between Partial correlation of score of Sample of rural habitat students of standard-XI on Achievement test and Classroom Interaction with Intelligence test were found $r$ (Achievement & Classroom Interaction) _(Intelligence).
Observation Description of Partial Correlation between Achievement & Numerical ability with Intelligence of sample of rural habitat students of standard-XI

- There is significant difference found between Partial correlation of score of rural habitat students Sample of the study of standard-XI on intelligence and Numerical Ability test with Classroom Interaction were found $r$ (Intelligence & Numerical Ability) _ (Classroom Interaction).
- There is significant difference found between Partial correlation of score of Sample of rural habitat students of standard-XI on Numerical Ability and Classroom Interaction with Intelligence test were found $r$ (Numerical Ability & Classroom Interaction) _ (Intelligence).
- There is no significant difference found between Partial correlation of score of Sample of rural habitat students of standard-XI on Intelligence test and Classroom Interaction with Numerical ability test were found $r$(Intelligence& Classroom Interaction )_(Numerical ability).

5.12 Recommendations for the Future Study:

There are many relevant unanswered questions which potentially serve as the basis for future study. The researcher recommends for the following studies that should be undertaken in future based on the findings of the present study.

1. A Study of achievement of students on various subjects at primary, secondary, higher secondary and college level may be under taken.
2. A Study of intelligence of students at primary, secondary, higher secondary and college level may be under taken.
3. A Study of Numerical ability of students at primary, secondary, higher secondary and college level may be under taken.
4. A Study of classroom interaction of students on various subjects at primary, secondary, higher secondary and college level may be under taken.
5. A comparative study achievement and intelligence of students on various subjects at primary, secondary, higher secondary and college level may be under taken.
6. A comparative study achievement and numerical ability of students on various subjects at primary, secondary, higher secondary and college level may be under taken.
7. A comparative study achievement and classroom interaction of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.

8. A comparative study intelligence and numerical ability of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.

9. A comparative study intelligence and classroom interaction of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.

10. A comparative study numerical ability and classroom interaction of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.

11. A correlation study achievement and intelligence of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.

12. A correlation study achievement and numerical ability of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.

13. A correlation study achievement and classroom interaction of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.

14. A correlation study intelligence and numerical ability of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.

15. A correlation study intelligence and classroom interaction of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.

16. A correlation study numerical ability and classroom interaction of students on various subjects at primary, secondary, higher secondary and college level may be undertaken.
5.13 Conclusion:

The findings and implications of the present study may create an awareness among the students, teachers and experts with reference to Gender-wise male students, Habitat-wise urban habitat students, male urban habitat students and female urban habitat students were found significant in achievement, intelligence, numerical ability and classroom interaction as well as positive and average correlation found between achievement and intelligence, achievement and numerical ability same as Intelligence and numerical ability, which shows that there is average correlation between the achievement, intelligence and numerical ability of the students. Subject teaching in classroom should be implemented teaching in classroom with reference to achievement, intelligence and numerical ability of the students to get effective result.